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UNITED STATES DEPARTMENT OF AGRICULTURE
Bureau of Agricultural Economics
Washington

THE POULTRY AND EGG SITUATION

Summary

Important features in the August poultry and egg situation, as reported by the Bureau of Agricultural Economics are (1) the large stocks of storage eggs, and (2) the prospect for a reduction in the size of the laying flock for 1938. At the very end of July, the feed-egg price situation, though still unfavorable to the farmer, became much less so.

The farm price of chickens was not depressed, apparently, by the relatively large storage stocks of poultry at the end of the out-of-storage season. The prospect for chicken prices therefore, is for a less than average seasonal decline from now to December, and an advance is possible. During the fall (see figure 1) prices are expected to exceed those of 1936. This prospect is due largely to the probability of higher consumer incomes and lower receipts than in 1936.

Farm prices of eggs this fall are expected to fluctuate near the prices received in the fall of 1936. The larger storage stocks offset, in their effect on egg prices, the higher incomes of last fall. Should incomes fail to be maintained, however, a lower price than in 1936 is likely.

The great reduction in the number of young chickens this year points to a reduction also in the size of the 1938 laying flock and hence to smaller egg supplies. Therefore, it now seems probable that egg prices in the first half of 1938 will be above those of the first half of 1937.

Feed situation

The feed situation in July, as represented by the Chicago feed-egg ratio, showed little change from June until the last week of the month. About 10 dozens of eggs were required to buy 100 pounds of poultry feed, though at the end of July the amount required dropped to below 9 dozen. As figure 1 indicates, the feed-egg ratio has been from 30 to 50 percent above the 1925-34 average for June and July. It is not clear now whether the feed-egg ratio during the rest of the year will more nearly approach the 1925-34 averages of corresponding months, or whether it will near the levels of 1936. While feed prices are expected to fall, egg prices are not expected to rise by as much as usual, so that the ratio itself will not decline as rapidly as feed prices. The ratio is quite unlikely to go as low as its average.

The feed-egg ratio at Chicago, by weeks, average
1925-34, annual 1935-37

Year	Dozens of eggs required to buy 100 pounds of poultry ration										
	Week ended as of 1937										
	Mar. 6	Apr. 3	May 1	June 5	July 3	July 10	July 17	July 24	July 31	Sept. 4	Nov. 27
	Doz.	Doz.	Doz.	Doz.	Doz.	Doz.	Doz.	Doz.	Doz.	Doz.	Doz.
Average: 1925-34	6.20	6.23	6.43	6.98	6.71	6.81	6.76	6.61	6.56	5.68	3.60
1935	7.30	7.10	6.77	6.34	6.22	6.15	6.16	6.16	6.35	5.14	4.32
1936	5.11	6.48	6.01	5.60	6.32	7.15	7.67	7.65	7.35	7.99	5.67
1937	9.17	9.72	10.80	11.23	10.18	9.94	10.64	9.30	8.77		

Number of young chickens

The number of young chickens per farm flock on July 1 was estimated at 19 percent less than in 1936 and the smallest in the 13 years for which data are available. Partly this represents a smaller hatch and partly a sale of a larger proportion of young poultry than is usual during June.

Poultry marketings

Receipts of dressed poultry at the four markets - New York, Chicago, Boston, and Philadelphia - in July, were 11 percent less than a year earlier and 8 percent less than in June. The 1925-34 average decline from June to July is 2 percent.

As seen in figure 1, this decline brings receipts below the 1925-34 average, and well below 1936. Because of the small hatch last spring it is likely that the 1937 line in this receipts chart will continue to remain below that of 1936.

Receipts of dressed poultry at the four markets,
average 1925-34, annual 1935-37

Year	Total Jan.-June	June	July	Aug.	Sept.	Total July-Sept.	Total Oct.-Dec.
	Mil. lbs.	Mil. lbs.	Mil. lbs.	Mil. lbs.	Mil. lbs.	Mil. lbs.	Mil. lbs.
Average 1925-34	120.7	21.0	20.6	22.4	24.8	67.8	168.7
1935	94.9	18.3	18.2	16.5	21.3	56.0	141.2
1936	101.6	21.7	22.3	26.0	27.0	75.3	177.2
1937	113.3	21.4	19.8				

Poultry storage

Stocks of frozen poultry, while relatively high for this time of year, are likely to have no further effect on the farm price of chickens. Poultry storage reaches a minimum in the summer and, by September, the into-storage movement is well started.

Chicken prices

The farm price of chickens advanced from June 15 to July 15 by 3½ percent. The usual movement at this period is a decline of 1 percent. Since the relatively large storage stock did not prevent this rise in price, it will probably have little effect during the rest of the summer.

With incomes above average and with receipts expected to be below average, the farm price of chickens will probably not decline by as much as it ordinarily does in the last 6 months of the year; an advance is possible. In other words, the 1937 chicken price line in figure 1 (which eliminates seasonal variation) is expected to continue the upward movement begun last March. If this advance is as much in the next 4 or 5 months as it has been in the last 4 or 5 months, the December price would be about 10 percent below the 1925-34 average, or about 14½ cents per pound.

Average United States farm price of chickens per pound,
average 1925-34, annual 1935-37

Year	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Average 1925-34	18.3	18.0	17.8	17.3	17.3	16.8	16.2	15.8
1935	15.7	15.6	14.0	14.1	15.4	15.7	15.9	16.0
1936	16.6	16.4	16.1	15.1	14.9	14.0	13.2	12.6
1937	14.8	14.8	15.3					

Nonagricultural income, average 1925-34, annual 1935-37
(Seasonally corrected indexes, 1924-29 = 100)

Year	Jan.	Mar.	May	June	July	Aug.	Sept.	Oct.	Dec.
Average 1925-34 ..	91.0	90.4	89.7	89.8	89.6	89.6	89.4	89.4	88.8
1935	75.4	75.8	75.8	75.7	75.5	76.7	77.3	78.4	81.5
1936	81.5	82.5	84.1	85.1	86.8	87.4	87.9	89.8	100.9
1937	82.9	95.3	96.9	97.2					

(This series on nonagricultural income has been revised again since the last issue. Complete data will be found on the last page).

Laying flock size

The average number of hens and pullets of laying age per farm flock fell sharply from June 1 to July 1 (see figure 1). The decline was 7.6 percent; the 1925-34 average decline is only 5.2 percent. January 1 to September 1 is a period of steadily diminishing size of flock, as there are normally about 25 percent fewer layers by September 1. Since the decline this year will be greater than average - already 24.8 percent as compared with an average decline of 20.4 percent - laying flocks this fall are expected to be smaller than in 1936.

Average number of laying hens in farm flocks, average
1925-34, annual 1935-37

Year	Jan. 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
	Number	Number	Number	Number	Number	Number	Number	Number
Average 1925-34 ...	87.5	73.4	69.6	66.8	66.1	70.4	75.7	81.9
1935	78.3	65.1	61.4	59.2	58.5	65.1	70.5	76.6
1936	80.6	66.5	62.3	60.0	59.9	66.9	72.4	78.9
1937	84.2	68.5	63.3					

The dominant factor influencing the change in the size of the laying flock on January 1 from that of a year earlier is the change in the number of young chickens on hand July 1. Figure 2 shows the estimated relationship between those two conditions. The solid line indicates that if the number of young chickens on July 1 is less than it was a year before, the number of laying birds on the following January 1 ought also to be smaller than a year before. The line shows that an 11-percent reduction in January 1 flock size corresponds to a 19-percent reduction in young chickens, such as occurred this year.

The feed situation may be expected to affect the number of young chickens to be saved for the laying flock - an unfavorable feed-egg ratio tends to encourage selling chickens rather than keeping them. The chart shows that a 30-percent increase in the average feed-egg ratio in July-December of 1937 over the ratio of a year before corresponds to a decrease of 1 percent in the January 1 size of laying flock. Similarly, a decrease of 30 percent in the feed-egg ratio corresponds to an increase of 1 percent in flock size.

With the 1937 feed-egg ratio likely, at least, to be no higher than in 1936 and probably a little below it, a 1 or 2 percent increase in the January 1 flock size would be the effect of the feed-egg ratio with no other conditions considered. Since the effect of the change in number of young chickens would indicate a reduction of 11 percent in flock size, a reduction of 9 or 10 percent would be expected as the total effect of both the feed situation and the hatch.

The extent to which other circumstances affect changes in the size of the laying flock, however, is shown in figure 2 by the failure of most of the points to lie exactly on the lines. Instead they occupy a band extending about 1 or 2 percent on each side of the lines.

Therefore, the decrease in flock size is not likely to be exactly 9 or 10 percent; it is more likely to be somewhere between 7 percent and 12 percent unless some new and important condition arises which is not now foreseen.

Rate of egg production

The number of eggs laid per hen reported on July 1 was again the highest on record for the month, though only slightly exceeding the July 1 ratio in 1935 and 1936. That the rate of production has been so high thus far in 1937, regardless of an unfavorable feeding situation, has been due in part to the larger than usual proportion of pullets in the flock. Since the feeding situation is likely to continue unfavorable into the fall, and since the effect of the present proportion of pullets will be gone by then, the rate of production in early 1938 is not likely to be as high as in early 1937.

Eggs laid per 100 hens and pullets of laying age in farm flocks, average 1925-34, annual 1935-37

Year	Jan. 1	June 1	July 1	Aug. 1	Sept. 1	Oct. 1	Nov. 1	Dec. 1
	Number	Number	Number	Number	Number	Number	Number	Number
Average 1925-34 ...	16.5	49.5	42.2	36.9	32.4	25.0	17.0	13.9
1935	16.9	50.3	44.1	38.2	32.8	25.9	19.5	16.3
1936	19.1	51.2	44.2	35.8	31.4	25.1	18.1	16.0
1937	22.0	52.5	44.4					

Egg marketings

Receipts of eggs at the four markets during July were 8 percent less than a year before. The seasonal decrease from June, 32 percent, however, was only slightly greater than the average (1925-34) decrease of 30 percent.

Receipts of eggs at the four markets, average 1925-34, annual 1935-37

Year	Jan.-Mar.	Apr.-June	June	July	Aug.	Sept.
	1,000 cases	1,000 cases	1,000 cases	1,000 cases	1,000 cases	1,000 cases
Average 1925-34	3,666	6,185	1,684	1,182	962	828
1935	2,891	5,079	1,429	1,101	788	719
1936	3,249	5,571	1,646	1,173	921	724
1937	3,392	5,597	1,599	1,079		

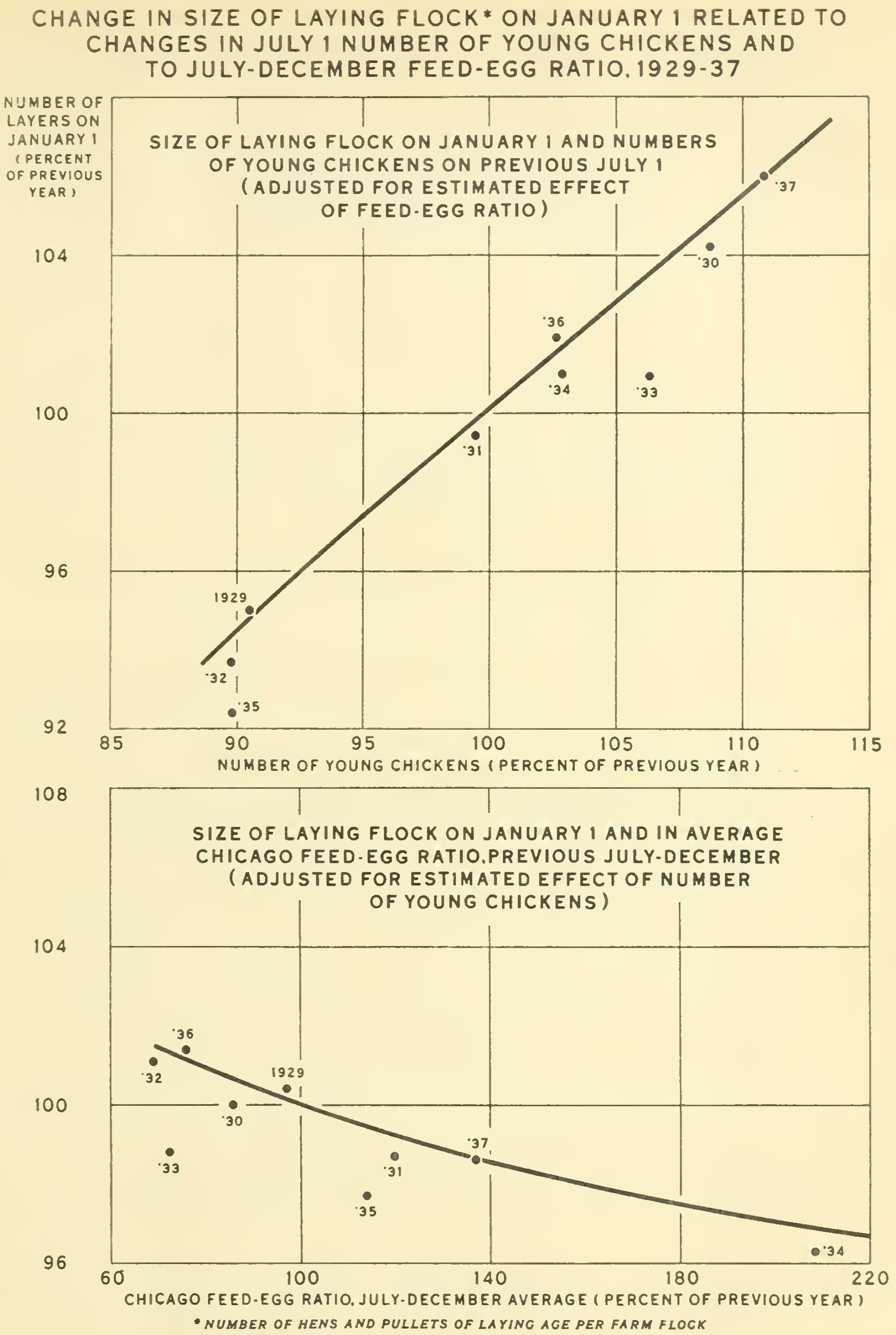
Egg storage stocks

Storage stocks of eggs, as measured at the 26 major storage centers, reached a peak in late July about 24 percent above that of 1936. Stocks of shell eggs were 15 percent above, and stocks of frozen eggs were 45 percent above those of 1936.

Cold storage holdings of eggs at 26 markets, average 1925-34, annual 1935-37

Year	Week ended as of 1937									
	Shell eggs					Frozen eggs				
	July 3	July 10	July 17	July 24	July 31	July 3	July 10	July 17	July 24	July 31
	1,000 cases	1,000 cases	1,000 cases	1,000 cases	1,000 cases	Mil. lbs.	Mil. lbs.	Mil. lbs.	Mil. lbs.	Mil. lbs.
Average 1925-34	6,268	6,351	6,400	6,434	6,434					
1935	5,040	5,105	5,202	5,242	5,242					
1936	4,863	4,979	5,105	5,141	5,067	67.5	69.0	70.2	70.3	70.6
1937	5,732	5,796	5,881	5,919	5,917	98.0	100.2	102.5	102.2	102.1

During the remainder of 1937 and for several weeks into 1938 these stocks of eggs will provide a major source of supply. The chart on the cover clearly shows how stocks this year compare with other years since 1916. Of particular interest is the constantly increasing proportion of the total storage holdings that is stored in frozen form. Though less than 3 percent in 1916, more than a third of the storage stocks were frozen eggs in 1937. If this trend continues, as seems likely, it must sooner or later bring about a reduction in the seasonal movement of egg prices. While shell eggs in storage must ordinarily be disposed of by the following spring, frozen eggs may be kept a longer time. The importance of storage stocks on fall and winter egg prices is illustrated in figure 3.



CHANGE IN SIZE OF LAYING FLOCK* ON JANUARY 1 RELATED TO CHANGES IN JULY 1 NUMBER OF YOUNG CHICKENS AND TO JULY-DECEMBER FEED-EGG RATIO, 1929-37

SIZE OF LAYING FLOCK ON JANUARY 1 AND NUMBERS OF YOUNG CHICKENS ON PREVIOUS JULY 1 (ADJUSTED FOR ESTIMATED EFFECT OF FEED-EGG RATIO)

SIZE OF LAYING FLOCK ON JANUARY 1 AND IN AVERAGE CHICAGO FEED-EGG RATIO, PREVIOUS JULY-DECEMBER (ADJUSTED FOR ESTIMATED EFFECT OF NUMBER OF YOUNG CHICKENS)

*NUMBER OF HENS AND PULLETS OF LAYING AGE PER FARM FLOCK

NUMBER OF LAYERS ON JANUARY 1 (PERCENT OF PREVIOUS YEAR)
104
100
96
92
85
90
95
100
105
110
115
NUMBER OF YOUNG CHICKENS (PERCENT OF PREVIOUS YEAR)
1929
'30
'31
'32
'33
'34
'35
'36
'37
108
104
100
96
60
100
140
180
220
CHICAGO FEED-EGG RATIO, JULY-DECEMBER AVERAGE (PERCENT OF PREVIOUS YEAR)
1929
'30
'31
'32
'33
'34
'35
'36
'37

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FIGURE 2.- THE LAYING FLOCK ON JANUARY 1 IS A FAIR INDICATOR OF TOTAL PRODUCTION DURING THE FOLLOWING SIX MONTHS. IT IS LARGELY BUILT UP OF PULLETS, SO THAT A LIGHT HATCH WILL TEND TO REDUCE FLOCK SIZE.

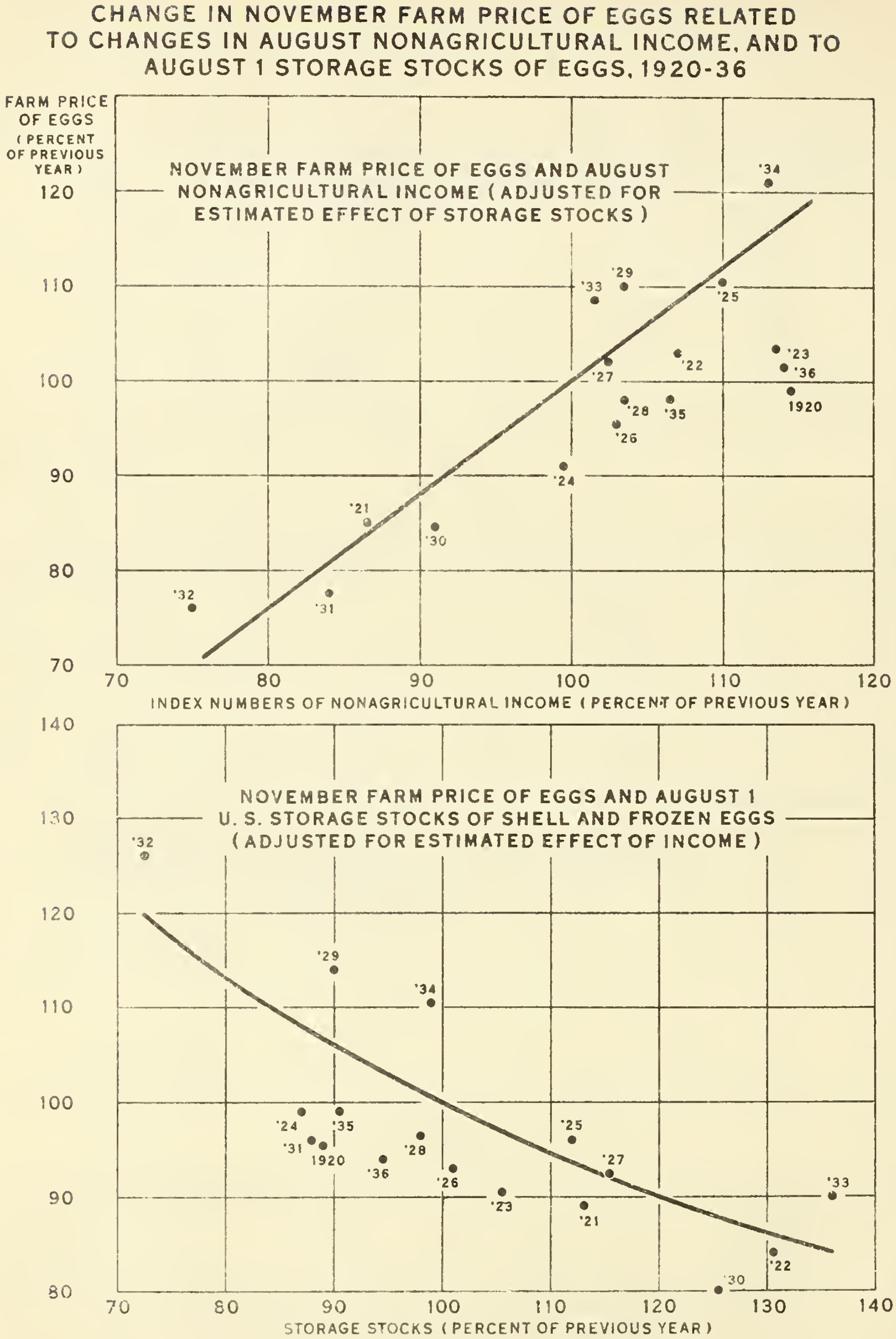

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Figure 3.- Consumer's income and storage stocks are the two dominant influences on fall egg prices. In 1937, according to August indications, these two factors may be expected to about offset each other.

Egg prices

The farm price of eggs rose 10.2 percent from June 15 to July 15. The average (1925-34) seasonal rise between these dates is 7.5 percent. By December, egg prices ordinarily double their March-June average. They are not likely to go so high this year. It is expected that they will follow about the course of last year. In other words, turning back to figure 1, prices during the remainder of the year are likely to fall further and further below the 1925-34 average for the same months.

Average United States farm price of eggs per dozen, average 1925-34, annual 1935-37

Year	Mar.-June average	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
Average 1925-34	18.8	18.6	20.0	22.0	25.7	30.0	35.4	35.7
1935	20.2	21.0	21.7	22.7	26.4	27.9	30.1	28.7
1936	17.8	18.9	20.0	22.4	24.5	27.6	32.5	30.5
1937	18.9	17.6	19.4					

Figure 3 shows the estimated effect of two important influences on fall prices of eggs. In the upper chart the solid line indicates that a 14-percent increase over 1936 in the August index number of nonagricultural income, such as prevailed in June, corresponds to about a 16-percent advance in the November farm price over that of a year earlier. The lower chart shows that a 24-percent increase in storage stocks, such as occurred this year, corresponds to a 12-percent decline in the November price from that of 1936. Hence, if the effect of income and of storage stocks is about as suggested by these charts, and if no other factors are considered, November prices, and those of other fall and early winter months, may be expected to exceed those of the 1936 season by about 4 percent. It is to be noted, however, that few of the points lie exactly on the lines of relationship. On the average, they depart from it by as much as 10 percent and more often than not are below it. This means that other circumstances often affect egg prices in these months to an extent of about 10 percent. In other words, fall prices may be expected to fluctuate near those of 1936.

Prices in the spring of 1938, of course, in view of the probable reduction in the January 1 laying flock, are likely to be above those of 1937.

Nonagricultural income, 1919 to date
(Seasonally corrected indexes, 1924-29 = 100) 1/

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year
1919	70.8	66.4	65.2	65.9	66.3	68.3	72.0	74.0	76.0	74.0	76.8	79.6	71.3
1920	84.0	81.1	83.8	82.9	83.3	84.6	85.2	84.6	83.7	81.1	79.8	76.4	82.5
1921	75.9	73.5	72.6	71.9	72.9	73.4	72.4	73.2	72.6	71.5	72.3	72.6	72.9
1922	70.8	70.2	71.0	70.6	73.7	76.7	75.6	78.0	80.6	80.2	83.0	83.1	76.1
1923	83.8	82.5	84.0	84.9	86.9	87.6	88.3	88.6	88.6	89.3	90.9	90.4	87.2
1924	91.7	92.6	92.1	92.7	90.8	88.9	87.6	88.1	89.3	89.2	90.0	92.7	90.5
1925	93.6	93.6	93.4	93.8	94.3	95.1	96.9	96.9	97.1	99.7	100.3	100.3	96.2
1926	100.3	100.6	101.0	100.3	98.4	99.7	99.1	99.8	100.9	101.9	101.6	101.3	100.4
1927	101.6	102.2	101.8	102.3	102.3	102.4	102.0	102.4	102.0	100.7	100.7	100.7	101.8
1928	101.8	102.4	103.1	102.6	102.6	104.4	105.2	105.7	105.4	105.5	105.3	105.0	104.1
1929	105.1	105.7	105.9	106.2	106.5	106.9	108.0	109.3	108.7	108.6	107.1	106.3	107.0
1930	105.5	104.6	103.7	103.4	103.2	102.2	101.2	99.3	98.2	96.2	94.6	92.8	100.4
1931	91.5	91.2	90.5	89.7	88.3	87.0	85.7	83.6	81.8	79.9	79.0	77.7	85.5
1932	76.8	75.2	73.2	71.0	68.9	66.2	64.0	62.9	63.6	63.5	63.4	62.3	67.6
1933	62.6	61.5	59.4	58.9	60.3	61.9	62.0	63.9	65.3	65.8	66.6	68.4	63.0
1934	71.5	71.1	71.9	71.2	72.2	71.9	71.8	72.1	71.0	71.8	72.5	73.5	71.9
1935	75.4	75.9	75.8	76.1	75.3	75.7	75.5	76.7	77.3	78.4	79.3	81.5	77.0
1936	81.5	81.9	82.5	83.1	84.1	85.1	86.8	87.4	87.9	89.8	92.6	100.9	87.0
1937	92.9	93.9	95.3	96.3	96.9	97.2							

1/ This series has been revised since the last issue.